

REMARKS

The Office action mailed October 24, 2006, has been received and its contents carefully noted. The then pending claims, claims 7 and 12, were rejected. By this Response, claim 7 has been amended, claim 12 has been canceled, and claim 13 has been added. No statutory new matter has been added. Therefore, reconsideration and entry of the claims as amended are respectfully requested.

Rejection under 35 U.S.C. 103(a)

The Examiner rejected claims 7 and 12 under 35 U.S.C. 103(a) as being unpatentable over Applicant's Admitted Prior Art in view of Adachi et al. (US 6,846,696) and in view of Yamaguchi et al. (US 20050153101) and Ono et al. (US 20040055223). Specifically, the Examiner deemed that it would have been obvious to use an absorber mechanism for decreasing material scatter. The Examiner also deemed that it would have been obvious to transmit a laser through a film and control the debris with the film in order to reduce subsequent particle removal processes. The Examiner also rejected the claims as being unpatentable over Applicant's Admitted Prior Art in view of Adachi et al. and in view of Yamaguchi et al. and Ono et al. and further in view of JP355105334A and JP363293970A.

Applicant respectfully submits that none of the cited references, Adachi et al., Yamaguchi et al., Ono et al. or the AAPA, alone or in combination, teaches or suggests coating the substrate with a water soluble liquid resin, hardening the liquid resin, or washing the water soluble resin and the debris with water. In particular, Adachi et al. simply discloses a method of sucking powdery particles generated during the laser working by using suction mechanism to decrease the amount of powdery dust and foreign matter. Yamaguchi et al. uses a water soluble fiber as a wire member, flows the wire member in a wire member-containing film by the washing with water to form numerous penetration holes therein, where no debris generates. Nowhere do these references teach or suggest coating the substrate with a water soluble liquid resin, hardening the liquid resin, or washing the water soluble resin and the debris with water.

Similarly, Ono et al. does not teach or suggest coating the substrate with a water soluble liquid resin, hardening the liquid resin, or washing the water soluble resin and the debris with water. Instead, Ono et al. is concerned with a photolithography technology and is silent about washing away the debris at the time of cutting the wafer together with the water soluble resin. When the photolithography results in dented portions, or protruding portions, they are removed with a solvent. In the instant invention, however, the water soluble resin is washed away with water.

JP355105334A and JP363293970A do not alleviate the deficiencies of AAPA, Adachi et al., Yamaguchi et al. and Ono et al. Nowhere do JP355105334A and JP363293970A teach or suggest coating the substrate with a water soluble liquid resin, hardening the liquid resin, or washing the water soluble resin and the debris with water.

In the present invention as claimed, the water-soluble liquid resin is hardened to form a protective film which is then washed away with water after the laser beam shining step. Since water is used as the solvent to wash away the water soluble resin, no additional washing step is required to wash away residual solvents such as alkaline solvents or organic solvents. None of the cited references, alone or in combination, teaches or suggests forming a water soluble resin as the protective film and then washing away the water soluble resin with water. Thus, the claimed invention is unobvious.

Therefore, the rejections under 35 U.S.C. 103(a) should properly be withdrawn.

Request for Interview

Applicant respectfully requests either a telephonic or an in-person interview should there be any remaining issues.

CONCLUSION

All of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicant therefore respectfully requests that the Examiner reconsider all presently outstanding rejections and that they be withdrawn. It is believed that a full and complete response has been made to the outstanding Office Action and, as such, the present application is in condition for allowance. If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided.

It is not believed that extensions of time are required, beyond those that may otherwise be provided for in accompanying documents. However, in the event that additional extensions of time are necessary to prevent abandonment of this application, then such extensions of time are hereby petitioned under 37 C.F.R. §1.136(a), and any fees required therefor are hereby authorized to be charged to **Deposit Account No. 02-4300, Attorney Docket No. 033773M056**.

Respectfully submitted,
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